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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/776,656

02/05/2001

David L. Johnson

AT/K-22162/P1/CGC 2054

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7590

04/08/2004

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EXAMINER

HAMILTON, CYNTHIA

ART UNIT

PAPER NUMBER

1752

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/776,656

Applicant(s)

JOHNSON ET AL.

Examiner

Cynthia Hamilton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 1/20/04, 10/24/03.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10, 11 and 13-21 is/are pending in the application.
- 4a) Of the above claim(s) 17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10, 11, 13, 15, 16, 20 and 21 is/are rejected.
- 7) ☒ Claim(s) 6-8, 14 and 19 is/are objected to.
- 8) ☒ Claim(s) 1-8, 10-11, 13-20 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

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**DETAILED ACTION**

1. The amendment filed October 29, 2004 and completed by the amendment filed January 20, 2004 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The change of 1.2 to 0.8 in Table 1, Ex. 6 for (B) UVI-6974 is not supported by the original disclosure. Applicants have cited page 27, lines 2-3 as support for this correction. These lines read as follows:

**acrylate, is a reduction in physical properties. Examples 5 and 6 are identical with the exception that example 5 contains free radical initiator. Without the free radical photoinitiator**

The examiner assumes applicants rely on the statement that Examples 5 and 6 are identical with the exception of example 5 containing free radical initiator. However, also found on page 27, in the last paragraph is the following:

**Example 6 is identical to example 8 with the exception that example 6 does not contain the hydroxy-acrylates required to give the unique stereolithographic resin. The result is that the**

Again, the statement is made that one example is identical to another with exceptions of components. This time it was Examples 6 and 8. Since the amount for (B) in Examples 8 which is 1.2, and 6 which was originally 0.8, now do not match. Where is the error? Further, in changing the data the totals do not match the changes. What is meant by "identical" here is unclear. Applicants have not given sufficient evidence to show such an error is clear from the record to be corrected. The support they give is confusing if considering similar "identical" statements on the same page in the original specification.

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2. The request to correct the inventorship in this nonprovisional application under 37

CFR 1.48(c) requesting addition of an inventor(s) is deficient because:

It lacks the written consent of any assignee of one of the originally named inventors.

Applicants have established the right of assignee to take action but have not sent written consent of said assignee.

Applicant is required to cancel the new matter in the reply to this Office Action.

3. The Declarations of Richard Leyden and Frank Tran filed on October 24, 2003 under 37

CFR 1.131 has been considered but is ineffective to overcome the reference. The evidence submitted is insufficient to establish a conception of the invention prior to the effective date of the Melisaris et al (WO 99/50711) reference. The publication date of the Melisaris et al document is October 7, 1999. While conception is the mental part of the inventive act, it must be capable of proof, such as by demonstrative evidence or by a complete disclosure to another.

Conception is more than a vague idea of how to solve a problem. The requisite means themselves and their interaction must also be comprehended. See *Mergenthaler v. Scudder*, 1897 C.D. 724, 81 O.G. 1417 (D.C. Cir. 1897). The evidence of conception is from the Tran Declaration, that on September 8 or 9 of 1999, Mr. Leyden, with Mr. David Johnson present, assigned Mr. Tran "the task of developing a liquid, radiation-curable composition with the same raw materials as our commercial product SL 5170 but to leave out the free radical photo initiator, and to make sure this new composition would achieve equivalent or better mechanical property values compared to SL 5170." Mr. Tran then avers that he formulated a series of six compositions called S179-39A through S179-39F. He submits the title of his lab notebook, i.e. S179, to show date he started on the experiments. The date on this page is September 10, 1999

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and what is on it is "SL 5170 Study with SR 394 (instead N3700)" The examiner notes that this page appears to contradict Mr. Tran's and Mr. Leyden's averment that the idea for removing the I-184, i.e. the free radical initiator, from the commercial product 5170, was part of Mr. Tran's work as of September 10, 1999. No supporting evidence of taking out the I-184 is found in the lab book pages until S179 39 D which is dated October 14, 1999. It is October 16, 1999 pages that show S179-39 E and S179-39F compositions being addressed for the first time. In the Leyden Declaration, Mr. Leyden avers that "at some point in early September 1999, I instructed Frank Tran ... to perform a series of experiments to support the above-noted modification of 5170. I understand that Frank Tran began running the experiments on September 10, 1999 and continued through December 27, 1999." The above noted is the removal of I-184 from Vantico's commercial product 5170 with the hope to prove that a formulation with out I-184 would cure as well as, or perhaps better than, 5170, which contained both I-184 and UVI 6974. These declarations are found ineffective to remove the Melisaris reference because of the appearance of contradiction of Mr. Tran's and Mr. Leyden's statements as to why the Tran Experiments were started. The Notebook page dated 9-10-99 appears to address exchanging SR 394 for N3700 as the reason for starting the comparisons upon which Mr. Tran's table of comparisons was started. Thus, this appears to cast doubt on when the idea for removing the I-184 from the 5170 occurred. Thus, the Declarations submitted are found ineffective to remove the Melisaris reference. Thus, the first paper evidence of removal of the photoinitiator I-184 is October 14, 1999 and that is after the required date of conception of October 7, 1999. The Leyden and Frank Declarations also fail to have the allegation that "the acts relied upon to

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establish the date prior to the reference or activity were carried out in this country or in a NAFTA country or WTO member country. See 35 U.S.C. 104.

1. Claims 1-5, 10-11, 13, 15-16 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over unpatentable over Melisaris et al (WO 99/50711) in view Tsao et al (4,156,035). Melisaris et al disclose the instant invention with the exception of (1) using free radical initiators when using acrylate compounds and (2) not requiring that an instant component c) be present. In Melisaris et al, see particularly wherein any free radical photoinitiator is usable, wherein hydroxyl-containing trimethacrylates are disclosed as acrylates useable, and wherein compounds like those in instant claim 12 are found, and component c) is the compound having at least one unsaturated group and at least one hydroxy group in its molecule. If component c) is a (meth) acrylate compound, Melisaris et al disclose always a free radical initiator with the use of a (meth) acrylate. Never is the (meth) acrylate compound used by Melisaris et al without one. In Melisaris et al, see particularly page 4, lines 10- page 8, lines 14, page 12, lines 23 to page 13, page 15, lines 8-9, page 17 first two paragraphs and last paragraph, page 18-19, page 24, fourth paragraph, to page 23 and page 29-30. Also in Melisaris et al, see page 28 with respect to instant claim 16. Any of applicant's examples given in their specification make use of known free radical initiators as set forth by Tsao et al (4,156,035). Tsao et al (4,156,035) teach aromatic onium salts, especially sulfonium salts, act to polymerize both epoxies and acrylates when mixed as in Table 1, formulation 5, and state in col. 4, lines 37-68, without the addition of the carbonyl type photoinitiators described. There is no mention of using an added sensitizer by Tsao et al for their sulfonium salts to be initiators of acrylates, i.e. free radical initiators. The substitution of one compound known to perform the same function for another given in the prior art is held

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prima facie obvious as is the addition of the product to the other to perform the same function. Applicants have presented comparative test results on page 26 of the specification. However, never do they compare a composition with the same amount of cationic sulfonium initiator wherein no free radical initiator is present with a mixture of these two when acrylates are present. Thus, there is no clear showing that the sole exclusion of the free radical initiator caused any unobvious results. As to the presence of component c), Melisaris et al teach their choice as part of the acrylate component of their compositions. With respect to instant claims 10-11, component d) is disclosed by Melisaris et al as a choice for the PEPO component on page 25, third paragraph, lines 7-12. With respect to instant claims 1-5, 10-11, 13, 15-16 and 20-21, the compositions of Melisaris et al wherein the cationic initiator is chosen to be one both free radical and cationically functional such as some of the sulfonium and iodonium compounds listed by applicants would have been prima facie obvious as would have been the increase in the amount of onium salt to cover the added function required as done by applicants in their specification in order to reduce the number of materials to be handled and as the substitution of one known free radical initiator for another. The examiner notes that this rejection is made because of the confusion as to what is meant by applicant's "the composition contains no free radical initiator". The examiner again notes that applicant's comparison on page 26 is insufficient to overcome this rejection. First, Example 1 and 2 do not use the same amount of cationic initiator. Examples 4 and 7 do show compositions with only differences in the free radical initiator present or not but applicants only state that the properties are similar and that curing does occur apparently in both systems ( the use of UVI-6974 without I-184 ), but the properties are not the same and some cure would be expected of the acrylate system by the art

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recognized ability of sulfonium initiators to act as free radical initiators. Further the showing is for 0.8 % cationic initiator thus is not commensurate in scope with the composition claimed and the cured material with the free radical initiator present was of higher tensile strength, higher elongation break and other variances in properties from the non I-184 cured material. In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists. *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990) (The prior art taught carbon monoxide concentrations of “about 1-5%” while the claim was limited to “more than 5%.” The court held that “about 1-5%” allowed for concentrations slightly above 5% thus the ranges overlapped.); *In re Geisler*, 116 F.3d 1465, 1469-71, 43 USPQ2d 1362, 1365-66 (Fed. Cir. 1997) (Claim reciting thickness of a protective layer as falling within a range of “50 to 100 Angstroms” considered prima facie obvious in view of prior art reference teaching that “for suitable protection, the thickness of the protective layer should be not less than about 10 nm [i.e., 100 Angstroms].” The court stated that “by stating that suitable protection’ is provided if the protective layer is about’ 100 Angstroms thick, [the prior art reference] directly teaches the use of a thickness within [applicant’s] claimed range.”). Similarly, a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected them to have the same properties. *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985).

4. Applicant's arguments filed October 24, 2003 have been fully considered but they are not persuasive. Applicants have argued that Melisaris et al (WO 99/50711) should be removed as a reference because it is made unavailable as prior art when considering the Leyden and Tran



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Declarations submitted under 37 CFR 1.131. The examiner has already addressed the inadequacies of these Declarations. The examiner notes that if applicants can clear up the question of conflict of the first notebook page addressing changing monomers in the composition instead of photoinitiators which appears to conflict statements of Tran and Leyden with respect to what Mr. Tran was working on prior to October 7, 1999 then the rest of the Declarations appear to support applicant's arguments with respect to conception prior to October 7, 1999. Applicants need to make clear where all disclosure and work took place. However, at this point the examiner sees an appearance of conflicting evidence of record as to what was conceived prior to October 7, 1999. The rejection stands with the addition of new claim 21 as required.

2. Claims 17-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Applicant timely traversed the restriction (election) requirement in Paper No. 6.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. This application contains claims 17-18 drawn to an invention nonelected with traverse in Paper No. 6. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

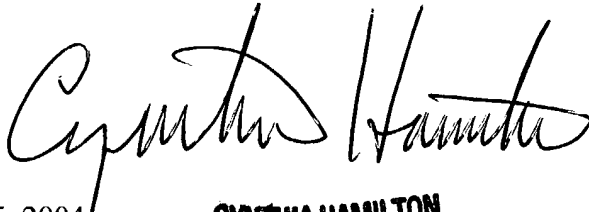
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Hamilton whose telephone number is 571-272-331. The examiner can normally be reached on Monday-Friday, 9:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Cynthia Hamilton". The signature is fluid and cursive, with the first name "Cynthia" written in a larger, more prominent script than the last name "Hamilton".

Cynthia Hamilton  
Primary Examiner  
Art Unit 1752

April 5, 2004

**CYNTHIA HAMILTON  
PRIMARY EXAMINER**